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THE GENESEE FARMER.

SATURDAY, MARCH 23, 1839.

DICTIONARY
OF
TERMS USED IN AGRICULTURE,
AND IN THE SCIENCES MOST INTIMATELY CONNECTED WITH ITS ADVANCEMENT.

[Continued from page 57.]

BARLEY. One of the common cultivated grains, in use from time immemorial, and extensively cultivated in modern times. It has a thick spike, with long awns attached to the kernel. It is divided into several kinds; of which the most common are the long eared or two rowed barley, the square or six rowed, and sprat or battle door barley. The six rowed is most commonly cultivated in the north of England and Scotland, having the reputation of being the hardiest plant. In this country the long eared or two rowed has usually obtained the preference; producing a whiter, fairer grain, and smutting less than other kinds. Barley in this country is principally used for malting; in other countries it is extensively used for bread, and for feeding cattle. Barley has met with little favor in this country as food for horses, but there is nothing improper in the grain, as is evident from the fact that barley is almost the only grain given to horses in the east, where the best and finest horses are found. The difficulty lies in the mode of feeding. Barley is one of the best substitutes for corn in making pork. It requires a rich soil, rather moist than dry; and the ground should be made fine before the seed is sown. From two to two and a half bushels of seed per acre, is the usual quantity allowed.

BAROMETER. An instrument for measuring the weight of the air. Torricelli was the inventor, about the beginning of the 17th century. Torricelli reasoned, that as the pressure of the atmosphere was equal to a column of water about 33 feet high, mercury, which is nearly 14 times heavier, would rise about 30 inches, and the result justified his conclusion. The changes in the height of the column of mercury preceding, or during changes of the weather, have given great value to this instrument, and obtained for it, among common people, the name of the *weather glass*, as foretelling the weather. It is a most valuable instrument at sea; its rapid fall previous to violent storms, putting the mariner on his guard, and since its use has been understood, has been the means of saving many valuable vessels and lives annually. It might be of essential service to farmers; but as yet has not received from them the attention it deserves, as connected with meteorology, a science in which they are so much interested.

BASIN. A term in geology used to designate a section of country converging to a point lower than the remainder, which part is most usually occupied by lakes, swamps, or rivers. Thus we speak of the basin of the Hudson north of the Highlands; that of the Mohawk above the Little Falls; or the basins of Lake Erie, and Lake Ontario. The best defined basins of Europe are those of London and Paris. The first of these basins is a bed of clay in some places 700 feet in thickness. The basin of Paris is formed of chalk, alternating with limestone marls and gypsum.

BAULK. Ground left unturned between the furrow slices in ploughing, and also strips of ground usually in grass between ploughed ridges, as in common field lands. These are the European definitions; in this country farmers give the term a rather wider definition, and include the strips of grass land that border ploughed fields, and occupied by fences, &c. When fences are removed such baulks are found the richest part of the fields. Few things indicate more clearly the general skill and conduct of the farmer than the baulks of his fields. The skilful ploughman is at once distinguished by his baulks, or rather by the absence of them, except where prevention is impossible. In such cases every precaution is taken to keep them free from weeds, and rubbish of all kinds.

BEAN. The plants that come under this designation are of two species, *Phaseolus* and *Vicia*. To the first belong the varieties of pole and bush beans usually cultivated in gardens; while the last, *Vicia faba*, is the bean known as the Windsor or horse bean, cultivated extensively in England as a field bean, and considered as of great value as food for animals of all kinds. In Europe, the bean is used, mixed either with peas or oats or alone, ground into meal, for feeding horses, fattening pork, or even as food for man. It is considered one of the most nutritive kinds of food; but in this country is little used, corn meal being considered a preferable substitute to bean meal, either for man or beast. The prices which are obtained for the common white bean, would seem to render it a proper article of culture on light soils, where it succeds better than on those of a heavier kind.

BEER. A liquor produced by brewing together malt, hops, and water; and when properly made is a nourishing and wholesome drink. Beer is, however, like most of the other liquors of commerce and trade, adulterated to a frightful extent by the introduction of ingredients of a cheaper nature than malt or hops, if not absolutely noxious or poisonous in their effects on the system. The quantity of beer consumed by English laborers is astonishing; especially during harvest, when it is provided by the employer. The greater part of the barley grown in this country as well as in England is made into beer; though the establishments for the manufacture here are on a small scale, compared with the magnificent ane expensive ones of that country. If the good old home brewed beer, from malt and hops, could be substituted for strong beer or whiskey among the classes that consume the most of these drinks, we think the health and morals of the country would receive a decided improvement.

BEET. A common vegetable of which there are several varieties, such as the scarcity and common beet of our gardens; the mangel wurzel or field beet, cultivated for cattle; and the white Siberian beet, grown principally for the sugar manufacture. The mangel wurzel is a valuable root, producing heavy crops, and being excellent food for sheep, fattening animals, and for milch cows. It requires a rich loam. The manufacture of sugar from beets in its most improved state consists in slicing the roots thin after they are well washed, drying them thoroughly in ovens, grinding them to powder, and then by putting this powder into water, dissolving the sugar while the fibre and the mucilage, which rendered the crystallization difficult, remains unchanged, and is separated from the sweet solution by straining. This is then evaporated, and the syrup crystallize in the usual manner. Beet thus treated yields from eight to ten per cent. For cooking, medium sized beets are to be be preferred, as they are found to be sweeter, and less fibrous, than those of larger size. Unlike most other roots, beets are fit for use, as soon as they attain a sufficient size; but it does not attain its full perfection till October, and when wanted for winter use, should stand as long as consistent with safety from frost.

BEE. (*Apis mellifica, L.*) A hymenopterous insect, of the family *Apiaria*, and well known as the honey bee. The valuable products of this insect, and its singular habits and instincts, have caused it to receive more attention than has perhaps been given to any other, (unless the silk worm is excepted;) and the naturalists of Europe, among whom we may mention Reamur, Cuvier, and Huber, have each largely written on this subject. The treatise of Huber is a model of such investigation and writing, and though later observation would seem to indicate that on some points he had been mistaken, still his work is likely to remain the standard authority in the natural history of the bee.

There are three sorts of individuals that make up a community or hive of bees. The female, mother, or as she is usually called the *Queen;* the males or *drones*, and the *working bees*. These last have been improperly termed *neuters*, since the experiments of Huber show they are females, and may at the pleasure of the community, and by an interesting process, be converted into the prolific Queen of the hive. Reamur asserts that the female in the spring lays as many as 12,000 eggs, in the space of 24 days. The product of the bee is of four kinds: the honey, wax, pollen, and propolis. The *honey* is drawn from flowers and undergoes little change, as is evident from its occasionally partaking of the narcotic or intoxicating effects of the plants from which it is derived. Age usually deprives it of these noxious qualities. The *wax* is elaborated from the honey by the bee. It is formed between the abdominal rings of the working bees, into plates, and is used for making the combs. The *pollen* or '*bee bread*,' under different modifications appears to constitute a large part of the food of the bees and their larvæ; while the *propolis* is used for lining the hives, closing unnecessary holes, &c. The working bees, and the Queen also, secrete an active poison, which is retained in a small bladder at the root of the stings, and through which it is ejected into the wound by pressure. The Mexicans have a bee, an excellent worker, domesticated like our common bee, but which has no sting, and in its habits is as harmless as the house fly. Several attempts to introduce them into the United States have failed; we believe from their inability to endure the cold of our winters. Mr. Weeks of Vermont, has paid more attention to the bee than probably any other individual in the United States; and he has in several valuable papers given to the public the result of his observations; correcting errors into which others have fallen, and disclosing many new and valuable facts in regard to their habits and proper treatment.

BEEF. Of all the kinds of animal food used, it is believed there is none finer flavored, more easily digested, or more nutritious than beef; certainly there is none more universally used as an article of human sustenance. To have beef in perfection it is necessary that the animal should be well fed; that the beast should be disposed to take on fat at the points where it is of the most value; that the pasture should be clean and free from noxious weeds, or if stall fed, that the substances used for feeding should be sweet and such as will communicate no unpleasant taste to the flesh; and finally, if salted, that the pickle should be carefully made, containing salt enough to preserve the meat perfectly sweet, yet not enough to harden the lean to the consistence and color of mahogany. Dried beef, properly prepared is an excellent article, and one which should be found among the stores of every farmer. In the tropical regions beef is preserved by being cut, as soon as killed, into thin slices and thoroughly dried in the sun. Sueh beef in the language of the country is called jerked beef. In some parts of the world, particularly in Abyssinia,

beef is eaten raw. At a feast, the animal is tied to the door post; the flesh, cut from the living beast, is served to the guests, the muscles still quivering with life, and the more distinct this action, the more highly is the flesh esteemed.

Bitumen. This is the name of a species in mineralogy, chiefly interesting as forming the basis of a large part of the coals termed mineral coal, an article of vast importance to the arts, commerce, and comforts of life. It has acquired several names, from its appearance in its different states of consistency. *Naptha* is a fluid, of a yellowish tinge, transparent, and with a peculiar odor. It consists of carbon 82.20, and hydrogen 14.80. It is found in many parts of the world. *Petroleum* is of thicker consistence than naptha, in some cases resembling in color and consistence, common tar. It is in this state that it is found in such vast quantities in the United States, principally at the salines on the Kenhawa and Muskingum, at the depth of from 300 to 600 feet. It is also found on the Olean creek in this state, and is the article known as Seneca oil. At Rainanhong in Birmah, is a hill containing coal, in which more than 500 pits have been dug for the collection of the petroleum, and from which 400,000 hogsheads are taken annually. In boring for salt in 1838 on the Tombigbee river in Alabama, at the depth of 600 feet the miners struck a vein of petroleum, which, flowing over the top in immense quantities, spread itself over the river for some fifty miles, and in that state was set on fire, forming a striking and brilliant spectacle. Compact bitumen, or *Asphaltum*, has lately attracted much notice from a new application, which, in connection with some other substances, has been made of it in paving streets, where its durability has been found to exceed granite. All the coal west of the Allegany mountains is bituminous, and some large beds of it occur on the east of this range.

Blast. A disease of plants, to which by different writers has been given the name of blight, blast and mildew. The latter, however, is evidently a distinct disease, and produced by different causes. Blast or blight has been divided into several varieties, affecting plants in different ways, and with varying intensity. Among these may be mentioned blight originating from cold. The north or easterly winds of spring often produce this, by freezing the tender shoots, or by retarding the flow of the juices. Thus the young fruits are deprived of their nourishment, and fall from the stem. Blast or blight from sultry wet weather, originating contagious disease of plants, is another of the forms noted, and mildew sometimes seems to result from this cause. The blight which sometimes strikes the grain of whole districts would seem to be owing to atmospheric causes thus generated, since the disease appears to follow, and be governed by the course of the winds. Blast from the want of nourishment, is another form of the disease but of which the cause is usually obvious. Impoverished land, too great quantities of seed, or injudicious culture, may produce this blight, but in this country it is oftener observed as an effect of drouth. Blast from *fungi* is the kind of blight which attacks grain also, and which has been erroneously attributed to particular plants, as the barberry bush, since the fungi on the leaves of this plant, and those that cause the blight in wheat are clearly distinct.

Blindness. No animal is so subject to blindness as the horse, and in most cases it can be clearly traced to the treatment they receive. Severe drawing in the harness, or racing, either on the course or otherways, will not unfrequently produce blindness, sometimes temporary, but often permanent. An examination of the pupils of the eye will most usually enable an obsrver to determine whether there is blindness or not. If the pupils when exposed to light after being in a dark stable, contract, the horse is not blind; if they contract unequally, or one not at all, then the vision is imperfect, or gone in one of the eyes. The hand placed close over the eye for a few minutes so as to render the eye dark, will show the dilation or contraction of the pupil, when no other convenient means of excluding light are at hand. A horse blind with both eyes will usually have his ears in constant and rapid motion, directing them in quick succession to every quarter, relying on hearing rather than sight; he will lift his feet high as if he were stepping over some obstacle, when there is actually nothing in the way. It is a common saying that *wall-eyed* horses are never blind. This is probably an error; as there appears no difference in their structure to warrant such an inference.

CAUSE OF SCARCITY OF FRUIT.

When the compartively little care and labor needed for the production of the finest fruit in this country, are remembered, the question very naturally arises, Why is its culture so much neglected? Why, with all the facilities of the finest climate and best soil, do we see scarcely one orchard in a hundred that produces any of the finest varieties, while some species are wholly neglected? The answer is, that the hope is small of obtaining the reward of the labor bestowed. There is probably not one cultivator of good fruit in the western part of the state who has not suffered more or less from the depredations of lawless plunderers, and many despair of ever obtaining for their own use the finest productions of their own hands. Some are under the necessity of gathering their fruit before it is half ripe, and there are cultivators of the finest kinds who are entirely ignorant of their excellence, because unprincipled pilferers, who scarcely know the difference between the worst and the best, are always ready to seize the reward of years of care and industry.

Although by the laws of the state, severe penalties may be inflicted for such injuries, yet under the present state of public opinion, such laws are of small avail. The truth, that every man is entitled to the fruit of his own labor, should be more generally felt. The man who has toiled and watched for years, would much rather have his pockets picked, than to be deprived of the fruit of that care and labor. Public opinion should as much denounce those, who, spending their own waste time in idleness, and neglecting to provide for themselves, are ready to rob the orchards of others, as it is now to denounce those who steal goods from the store or money from the drawer.

There is reason to believe that a change in this respect has already taken place, and no pains should be spared to correct the false feeling which now prevails. Common schools could not be more usefully employed than by instilling into the minds of the rising generation an abhorrence of this evil; and every reading book should to teach this necessary part of morality. Its importance to the prosperity, the real, substantial prosperity of our country, is hardly appreciated even by those who have reflected much upon it. There can be little doubt that habits of stealing, early matured as they so often are by this practice, are acquired to an incurable degree, and become ultimately the means of filling our jails and prisons with their victims. On the other hand, in consequence of the little inducement there is for small cultivators to employ their leisure time in the interesting occupation of cultivating fruit and rendering their homes attractive, their vacant portions of time are too frequently spent in the bar-room; and their children instead of being virtuously employed at home, acquire habits of idleness and evil which often continue through life. J. J. T.

SAP OF THE SUGAR MAPLE.

The assertion is frequently made that trees of the sugar maple afford a richer sap when tapped at some height, than when the operation is performed nearer the ground. This is said to be owing to the greater quantity of saccharine matter which the sap successively dissolves in its progress up the tree. It may save some trouble to manufacturers of sugar who have adopted this opinion, to give an experiment made some years ago by the writer. A quantity of sap was drawn from a small maple tree at the roots, and another portion from one of the higher branches; by repeatedly tasting these two portions, the slightest shade of difference was imperceptible. It becomes an interesting object of inquiry to determine at what time or in what manner the water of the sap receives its supply of saccharine matter. We know not why writers on vegetable physiolgy represent the *sap* of plants as possessing only the properties of pure water. Compared with the proper juice, it is true there is a great difference in this respect, the relative quantity of other matter which the sap contains being exceedingly small. But that the sap is not pure water, is obvious. This part of physiology appear to have been little investigated. J. J. T.

ITEMS IN DOMESTIC ECONOMY.

To separate wax from the impurities of the honey-comb, put the comb into a bag, place it in a kettle of cold water, tying a small stone or other weight to the bag to prevent its floating, and hang the kettle over a fire. As the water becomes hot, it melts the wax and causes it to rise to the surface by passing through the pores of the bag, while the impurieties remain.

Medicines should never be kept in papers, but always in bottles and vials; and care should be taken that whenever procured they be always immediately labelled. Serious accidents have occurred and lives sometimes lost from neglect in this particular, by administering powerful substances through mistake.

It often happens that ground glass stoppers of vials and decanters become so tight that it is impossible to draw them out. To remedy this difficulty, apply the hand, which has been previously heated before the fire, to the neck about the stopper, and by heating it, and thus causing it to expand and consequently to increase the orifice about the stopper, it will render the stopper easy to be removed. If the warmth of the hand is not sufficient, apply a cloth dipped in hot water.

Strong paste is made by mixing flour and water while cold very thoroughly, the water to be in such proportion that when mixed it may be quite liquid, and then boiling it till it is of a glutinous nature, stirring it constantly. The strength is much improved by adding, while boiling, from one-fourth to one-sixth of the weight of the flour in powdered alum. As rye is more glutinous than other grain, it makes a stronger paste; when made into paste with alum, it is nearly as strong as glue.

To prevent rust on steel instruments, rub them over while warm, with white wax, then melt the wax before a fire, and continue to rub it with a cloth, until the original polish is restored.

Cranberries may be preserved for a long time, by drying them partially, and corking them very closely in bottles. A coat of sealing wax over the cork would be advisable.

To make court-plaster, take very thin silk, dip it in a solution of isinglass (or fish glue) with water, and after it becomes dry, dip it several times in the white of egg.

A very good material for blacking shoes and boots, may be made in a few minutes by putting half a teacupfull of lamp-black in a tin basin or dish, adding the white of an egg, and rendering it sufficiently liquid by adding and mixing thoroughly with it, a quantity of vinegar. The only labor is mixing the materials, which do not very readily incorporate.

To make cement for glass or earthenware, take unslacked lime, the fresher and finer the better, pulverize it in a mortar, and sift it through a fine seive, or coarse muslin. Mix this thoroughly and rapidly with the white of eggs, so as to form a thick paste, and use it immediately. Broken dishes may be mended with this cement, and if neatly and skilfully done, adhere very strongly. Isinglass dissolved in alcohol, is also strongly recommended as a good cement for this purpose.

An effectual mode of preserving eggs, is to oil them all over when fresh, and lay them in a box. Fill the box and turn them over every day.

Whatever you use frequently, buy by the quantity, especially whatever is obtained in bottles or boxes. For instance a sweet oil bottle holds more than twice

as much as a flask, but does not cost twice as much; or, a large box of blacking is cheaper and much more convenient than the same quantity in small boxes.

True economy dictates the saving of every thing not wanted at present, but which may be useful hereafter. Hence separate and suitable boxes, placed in very convenient situations, should be appropriated respectively to iron rivets, staples, sheet iron, old nails of different sizes, pieces of leather, twine, wrapping paper, rags, buttons, &c. They can then be readily found a when wanted.

Where books, with common polished backs, have had the polish rubbed off by chafing, it may be easily restored by rubbing them over with the white of eggs, and when dry burnishing the leather surface with rounded piece of ivory or other similar hard substance.

J. J. T.

FEEDING SHEEP.

To have sheep do well in our severe winters, they should not only have enough to eat, but it should be given to them in such a manner that they may receive the full benefit of the food given. Daubenton and some other writers have calculated that two pounds of hay a day is sufficient for a sheep; but this is greatly depending on the manner in which they are fed. Sheep more than most animals, require feeding often, and in small quantities. They should never be fed less than three times in a day, and if the same quantity of food is divided into still smaller portions, by more frequent feeding, it will be the better for the flock. Every farmer should remember that sheep are very unequal feeders, in cold days eating nearly double the quantity they will consume in a warm damp one, and the feeding should be regulated accordingly. If indeed such a day, their food is, as is frequently the case, all given to them at a time, their breathing upon it, and trampling upon it, will render it nearly useless to them. But we do not imagine that two pounds of hay per day will keep a sheep in good condition for four or five months, or that a ton of hay will keep nine or ten sheep through the winter of our climate. They require something more; they long to get at the earth, and since that is impracticable, green food of some kind should be given them with their hay. A few cut turneps, potatoes, or carrots, salted occasionally, distributed daily among the flock, will greatly assist in keeping them in good flesh and heart. Farmers would escape much of the disease, as shedding of wool, loss of lambs, and general injury of their flocks, consequent on poor keeping, by giving that attention to this truly valuable animal, which none better repays.

HEADING DOWN PEACH TREES.

The easy culture, and rareness of disease in the peach tree, in Western New York, has caused little attention to be bestowed upon it after transplanting. There is however, good reason for believing that the quality of the fruit may in many instances be greatly improved by heading down the old tops.

It may be observed that in general peach trees after becoming twelve or fifteen years old begin to bear fruit of diminished size and flavor. At the same time the growth becomes less thrifty. By removing a part of the branches, new and vigorous shoots are immediately shot forth, possessing the same thriftiness of growth, and bearing the same large and fine fruit that are produced from young trees. This is frequently observed to take place spontaneously, where old old trees, loaded with fruit, had been broken down by the wind, and young shoots had subsequently shot up. J. J. T.

THE ROCHESTER SEED STORE.

From a notice in another column, it will be seen that Messrs. Reynolds & Batcham, the founders and proprietors of the Rochester Seed Store, have dissolved their connection in business, and the concern will hereafter be conducted by Mr. Batcham alone. Knowing the extensive influence which this establishment exerts on the cause in which we are engaged, and the interest which many of our readers feel in its operations, we deem no apology necessary for making a few remarks on the subject.

In promoting the cause of improvement we consider the Seed Store and Agricultural Warehouse, next in importance to the agricultural journal. For it is in vain that we read and learn about new systems and improved articles of cultivation, unless they are brought within our own reach, so that we can adopt and carry into practice what we learn in theory. This can be done in no way so conveniently as by an establishment of this kind, conducted, by men of integrity and public spirit, who understand their business, and aim not to promote their own interests alone, but the interests of their customers and the good of the community.

To understand the importance of this establishment, and the extent of its influence, we have only to examine the extent of its operations. It has now a branch or agency established in each of the principal places of Western New York. To say nothing of the amount of garden seeds and other kinds of field seeds, the quantity for field root crops alone, including mangel wurtzel, sugar beet, carrot, ruta baga and turnep, sold during the past year, Mr. Batcham informs us, was *four thousand pounds.* This is enough to sow more than three thousand acres, and was doubtless distributed among at least five thousand farmers. These facts speak volumes in praise of the establishment, and while we rejoice at its flourishing condition, we hope it will always deserve and receive the confidence and liberal patronage of the community. We feel well assured that the present proprietor will spare no pains to sustain the reputation of the establishment. He is practically familiar with the science of horticulture and agriculture, both in this country and in Europe and has been seven years engaged in the seed business. He has made arrangements for importing annually large supplies of seeds, &c. from England, as well as from different sections of this country. And he informs us that he has lately concluded an arrangement with an English seedsman and horticulturist who has purchased a farm near this city, for the purpose of growing seeds and testing the merits of new agricultural and horticultural productions. Arrangements are making also to secure a better supply of improved implements and agricultural machines.

We perceive that Mr. B. is making great improvements in the appearance and convenience of his store, which, when completed, will not suffer in comparison with any establishment of the first kind in the Union. *

ROOTS---ROOTS.

The importance of raising roots to be used as food for cattle, horses and swine, during our long winters, cannot be too often nor too strongly impressed upon the farmers of Maine, at least until more of them enter somewhat more largely into the business than they do at present.

Potatoes are planted by every one as a matter of course. Next to potatoes perhaps the Ruta Baga crop commands the most attention. The sugar beet is next in order, though of but recent introductiou. Mangel Wurtzels have not generally found so much favor with the farmers of Maine as they ought to; nor has the carrot—but the most neglected of all is the parsnep. We do not recollect of ever having seen a field of parsneps growing in Maine, and yet we verily believe that, all things considered, they are the most profitable of either as an article of food for stock and swine. We have heretofore tried some experiments on a limited scale with them, and, Providence permitting, we shall go more extensively into it another season. They require a little more care when they first come up, and are smaller than Ruta Baga, but are not so difficult as the carrot. They seem to be more nourishing than any other root, and chemical analysis warrants this idea. They will keep in the ground during the winter, but must be dug before they vegetate much in the spring. They will not keep so well in the summer as the Ruta Baga. The farmers in the Island of Jersey, near England, are said to make their main dependence upon this root, and their cattle and swine are thereby rendered very profitable. The only objection that we know of, to the carrot, is the trouble it gives in weeding when it first comes up. Its small leaves so much resemble some of the weeds, that if the ground is very foul, it requires careful management to avoid hoeing it up with them. We have seen the good effects of these upon a horse to which they were given during the winter season. They certainly are preferable to oats, or at any rate were for that horse.—The animal was a very fleet one, and belonged to a neighboring Physician who had a great deal for him to do; and yet he kept in perfect condition with no other food than good hay, and from a peck to a half bushel of carrots per day.

The Mangel Wurtzel will yield, when put in a favorable situation, as much per acre, perhaps, as any other root. John Hare Powell once raised sixteen hundred and thirty-four bushels to the acre and 14 rods; and Messrs. H. & T. Little, of Newbury, raised thirty-three tons, ten hundred and fourteen pounds to the acre. But English writers have told us of sixty tons to the acre.—We believe that it requires a richer soil than Ruta Baga, and more of a clayey loam. Hogs are very fond of them. We saw Mr. Haines of Hallowell feeding his swine with them last fall, raw, and the manner in which they took hold of them, and the good condition which they exhibited, convinced us that they were very profitable and nutritious to them. See his communication in the last number of the Maine Farmer. The more we see and learn of the value of the several root crops in Maine, the more convinced are we that it is the true policy of our farmers to cultivate them extensively;—and we hope that many who never have yet paid particular attention to this business, will begin this year. Manure high and plant close, and we will insure you a good and a profitable crop.—*Maine Farmer.*

Winter killing of Fruit Trees.

Mr. Cole,—Great complaints are made, throughout the country, by the growers of choice fruit, peaches, pears, plums, &c., of the trees winter killing, and no remedy has yet been found to prevent it. I may be wrong in hypothesis, but I will suggest a plan which I think will be a full remedy, and preserve all those kinds of fruit trees in perfect health and fruitfulness.

And first, I would remark that, if my theory is right, it is not the winter, which kills these trees, but the spring.

The cause of the killing I suppose to be this. In the warm spells of weather, which we frequently have in the spring, after frost is out, the sap starts and the sliver begins to form, and also the yearly growth of the tree. Then a sharp freeze comes, when that sliver is very tender, and freezes it and kills it. This produces dead places in the bark, and warts, and other diseases in the tree, and sometimes, when the freeze is very hard, the death of the whole tree. And even our hardy forest trees have sometimes been killed by these sudden spring changes.

The remedy that I propose is to throw straw, or any other kind of litter, about the body of the tree, say one foot thick, and five or six feet diameter, in the latter part of the winter. This covering will preserve the frost in the ground and prevent the sap from starting, and the sliver from forming. Keep the tree in this condition till the season has so far advanced as to produce grass fit for feed. By this time no danger will be of any weather cold enough to freeze. Then remove the litter and the frost will directly be out, and then the tree will proceed with its growth without interruption, and will be healthy and bear abundance of fruit. If farmers would take the care and trouble to manage their trees in this way, the probability is, they would find no difficulty in raising all those kinds of delicious fruit in our cold climate, and preserving their trees in good health and thrift, from year to year. Philo.

Portland, Feb. 16th, 1839. [*Yan. Far.*

Pigs in Clover.

We have once or twice lately called the attention of those interested in raising pigs, to the importance of having a clover lot for them to graze in, during the summer. The following experiments tried some years ago by Mr. Jones, near Dublin, show the value of this feed for them. He was in the habit of keeping from 25 to 30 swine, by penning them upon clover from May, to October. His mode was to make a moveable fence, or hurdles sufficien to enclose a space about twenty yards square. This he moved every day. At night he drove the swine to the stye, and usually kept them in the stye whenever it rained. He fed them, when they run out, at night with the wash from the kitchen, and butter-milk, &c., from the dairy. Two English acres of tolerable grown clover were ample for them during the season, as they went over it three or four times, and they manured the land in the meantime sufficiently for a good crop of potatoes another year.—*Me. Far.*

The Commissioner of the Patent office at Washington gives notice that all assignments of Patents, whether in whole or in part, will hereafter be recorded free of charge.—*Eve. Post.*

COMMUNICATIONS.

MANAGEMENT OF SHEEP---No. 3.

Mr. Tucker—In my last I disposed of two propositions, viz: that protection will tend to prevent several diseases to which sheep are subject—therefore save life;—and, that it will, also, improve the quality of the fleece. The next in order to be considered is, that *protection will increase the weight of fleece.*

Before I adduce any facts to demonstrate the truth of this position, it will be my endeavor to confute an heresy which is abroad among wool growers, and influences, perhaps, more than any thing else, to allow their flocks to be exposed to the inclemencies of winter. I have been made aware of it from conversations with very many on this subject, and three quarters of them all are entrenched behind the absurd doctrine. It is this:—that all animals which have hair for a covering, in obedience to a law of nature, when cold weather approaches—this covering thickens, and in proportion to the degree of cold to which they are exposed;—ergo, the same cause will operate to increase the quantity of wool of the sheep. This is a fact in regard to many animals living in a climate *like ours*, and subject to its extremes of heat and cold, and therefore, can not be controverted. But singular as at a superficial glance it may seem, this cause does not operate to the same extent with sheep, and *not at all* with *those* which produce the *finer qualities* of *wool*—which I will attempt to show.

The fact appeared in my last, that all the fine wooled sheep which are scattered over certain portions of the world, originated in Spain;—that the climate of that country is far milder than ours, and the general temperature throughout the year more equable. From the well known fact, that through a course of centuries, no degeneracy has taken place in the sheep of that country, it will appear conclusive, that the climate is perfectly congenial to the animal. Now for example—and the comparison is very apposite—the exotic shrub, or plant, in order to thrive and propagate its kind successfully, must be cultivated in a soil, and surrounded by a temperature similar to that where it originated, otherwise, it will either die, or will so far degenerate as to lose some of its original properties and qualities. The application of this is pertinent to the finer grades of sheep. They are transferred from a climate which is mild and equable to this inconstant and rigorous one of ours, which is unnatural; and this arises from physical organization not adapted to, and incapable of resisting its effects;—therefore the animal cannot thrive, and this being the case, it is perfectly absurd to suppose that its wool can increase by exposure. Here lies the foundation of the heresy alluded to; the fact is entirely overlooked—or else, wholly unknown—that all fine wooled sheep are exotic.

But this is not the fact in regard to the horse. This animal is peculiar to no particular climate; it is found in a wild state from the torrid zone to the plains of Russia—nature having endowed it with a powerful constitution, it is easily acclimated; and so with cattle—and when either are transferred to a climate colder than that of which it is a native, the effort of nature to clothe it sufficiently to resist the severity incident to exposure, is seconded by vigorous constitutions, and is successful. Not so with the fine wooled sheep. The effort which nature makes to increase the covering for its welfare is equally great, but from want of equal hardiness of constitution, is not thus added, consequently, the effort—if I may so—is paralized and overcome. The result is, the sheep becomes impoverished and feeble; and like the plant, from want of congeniality of climate, fails to thrive, and degeneration in regard to fleece and carcase follow.

When a sheep is in good flesh, and healthy, that its wool will grow and increase to a greater extent than when its condition is the reverse, is a perfect axiom.—This you perceive brings me at once upon the same ground which sustained my first position, viz: the importance of keeping up good condition. Can this be done as well without protection as with it? If you hesitate—having tried *both ways*—I will relieve your doubts by telling you most unequivocally *you cannot do it.* Hence the necessity of protection to counteract the hardships of our climate—as an indispensable means to *promote good condition*, and *increase of wool* will follow.

But I will turn to plain and stubborn facts to confirm my theory, or, leaving the theory entirely out, sustain the simple proposition itself.

For several years before protecting my sheep—when their wool approached somewhere near its present fineness—the average yield per head was only from 2 lbs. 7 oz. to 2 lbs. 9 oz. These variations are to be ascribed, in part, to the disparity of seasons, but principally to the difference of condition of the sheep. Of the clip of '36—that, it will be remembered, being the first year of sheltering—the average was 2 lbs. 10½ oz. Three hundred of the flock were yearlings, and the quantity of wool taken off when tagged, was 325 lbs. I will here state, that on a distant farm the shelters were mere hovels, very imperfectly made, and in fact little better than none, so that 500 wethers fared badly. But notwithstanding this, together with the terrible severity of that winter, the gain per head was 1½ oz. beyond any former yield, and the aggregate quantity 141 lbs. The following year I sheared 1751, and the entire product was 5,082 lbs., being an average of 2 lbs. 14 oz. per head; 490 were yearlings—which all practical farmers know shear light fleeces—and the quantity of tag-wool was 420 lbs. Here you perceive is a gain per head of 5 oz. over any clip *previous* to protection, and an entire gain of 547 lbs. Last year the number sheared was was 1860, and the whole product 5,210 lbs.; averaging 2 lbs. 12¼ oz. and another gain of 436 lbs. By troubling yourselves to add these several amounts together, you will ascertain that the increase of wool in *consequence of protection*, of three clips, is 1,113 lbs.!! This, however, will be more particularly noticed when other items of increased profit are brought before you.

Here I deem it necessary to make a short digression. Some of your readers, doubtless, whose information is limited in reference to sheep—will exclaim, "here is a *great cry* about protection, and *little wool;* that *their* flocks are exposed, and the average is from 3 to 4 lbs." It should be known that the *finer the fleece*, generally, the *lighter it is.* In order that a correct notion may be formed of the grade of my wool, I will state, that for a series of years past, it has been purchased by the Messrs. Lawrence of Boston, for the Middlesex Co. and that for the clips of 1835 and '36, I received about 75 cents per pound. These years are instanced, because, the prices of wool since then, have been too unstable to form a correct estimate of quality from price. Maj. Grant of Walpole, N. H. who has a very fine flock of Saxons, has informed me that his average but seldom, 2¼ lbs. and generally about 2¼ lbs.

I have before me, a letter from S. Lawrence, Esq. of Lowell, Mass., who was introduced to the readers of the Farmer last year, stating, incidentally, that the Middlesex Co., with which he is associated, had purchased two clips, one averaging only 1 lb. 10 oz., the other 1 lb. 11 oz.! Doubtless one of these was taken from a *pet* flock of 500 Saxons belonging to Mr. L.; the wool of which, from the fact that it has received the first premiums for several years successively at the Boston and New York Fairs, is as fine, or the very finest grown in the United States. Having seen samples of it, I can safely say, it "goes ahead" of any I have ever seen. Such wool is now worth, here, 90 cents per pound; but if placed in the English market would command 120 cents; showing that the American manufacturers are regardless of discrimination; and by their wicked course, are slaying the goose which lays the golden egg. The time is not distant when they will go whistling to the Europeans for all their fine wool. But no more of this now—I shall attempt, however, before the next clip to "wake up the right passengers," and prove most conclusively, that we who grow *fine wool*, are, and have been, "pretty considerably *fleeced.*" You will gather from what has been said, that the weight of fleece is generally in proportion to its quality.

Having based my position upon a rock of facts, which I defy the sceptic to overthrow, I proceed to the fourth, viz: that protection will tend to increase the number of lambs—prevent diminution of size, and degeneracy in every particular.

It is almost superfluous to tell an intelligent and practical farmer, or the scientific man who in theory is well acquainted with the physiology of animals, that with a view to produce a vigorous and healthy offspring, the sire and dam should possess sound constitutions, and that good condition of the latter during pregnancy is of the highest importance. It has been by means of great attention to these particulars, together with skillful crosses, that all the improvements in the breeds of domestic animals are to be ascribed. The opposite of all this is practiced by the great majority of farmers, and accounts, in a great measure, for the ill shaped, puny and diminutive race of animals scattered over three-fourths of the farms in our widely extended country. The splendid Durham, the Leicester and South Down sheep, and Berkshire hog, will all degenerate to the likeness of *the natives*, unless farmers adopt a very different course from that which is common. It will never answer to let these noble breeds I have named, run down in flesh during six months of the year, so as to require the other six to restore them again. It is only by keeping up good condition the *year round*, and the nicest attention in selecting breeders, that you will be able to keep up size and beauty of form; and by so doing the offspring from generation to generation will possess the original qualities of the ancestors. Depend upon it, my brother farmer, this is sound doctrine, and your $1000 Durhams will tell the story in a few years, unless you reform your management. Let *good condition the year round*, be inscribed over your barn-yard gate. Remember, as you sow, you reap; or in other words, as you manage your stock, whether ill or well, so will be their offspring.

Well, this important matter of uniformity of condition, I have repeatedly said, could not be sustained with my sheep before they were protected—and these were the consequences.

The period which I have chosen for ewes to drop their lambs, is during the month of May. When this truly important time arrived, very many of them were sadly impoverished, and, of course, feeble; the consequence was, that many of this class were unable to deliver their lambs without assstance; and others again, if done without aid, were unable to rise. It is easy to conceive what was the nature of the offspring from the condition of the dams;—small, puny, ill constitutioned affairs; and if they lived at all, from want of a sufficient supply of aliment, were, comparatively, a race of runts. My losses were very great, especially if a *prospective* estimate is made. By the way, this item shall receive attention hereafter, which will make some of you stare, admtting that calculations based on figures "do not lie." It is almost needless to remark, from the character of such a progeny, that when winter came, it brought with it the terrors of death to many; and the poor things might well have thought, in the language of the infant's epitaph:

"Since we are so soon done for,
Wonder what we were begun for."

But *since* protection, I have a very different story to tell you. The ewes, when the lambs were folded, were healthy and strong; and it can be said with truth, as it is a personal business, I have not found during the last three seasons, altogether, 20 ewes needing the assistance above mentioned. The lambs were alike healthy with the dams; the losses comparatively nothing; and from the ewes possessing abundance of nutriment, in part owing to *good condition*, the offspring grew rapidly,

and upon all this, nature founded vigorous constitutions. To confirm the importance of what we farmers call a "good start"—the winter of 1836 and '37, out of nearly 500 lambs, I lost,—incredible as it may seem—*only two!* and these died after the foddering season had expired; but they received, as is common every winter, my personal attention. They were fed half a bushel of oats to the hundred, and as good hay as ever came out of a barn. N. B. ☞ That which comes out of stacks is quite *another thing*. To show still further the importance of early, thrifty condition—and the remark is applicable to all kinds of domestic stock—the sheep of my flock, which were born *since* protection (now three years) are *larger* and finer formed than those which are older. This, I can assure you, is not mere fancy; and if confirmation is necessary, by calling upon me, I will abundantly satisfy you.

I have some other remarks to make, but my chapter is already too long. The conclusion is—that a dam in good condition will generally produce a healthy and vigorous offspring;—*ergo*, the necessity of protecting sheep, as a means to promote this co dition.

The remaining positions shall receive attention in my next, and which will embrace some items of *extra* profit derived from protection. L. A. M.

Lansing, Tompkins co. N. Y. Feb. 25th, 1839.

SILK.

As I am fully convinced by the knowledge furnished by those who have made experiments, and by the little experience I have had, that the raising of silk will ere long become one of the most important branches of American industry, I feel it a satisfaction as well as duty in "furnishing my quota of knowledge," although it may be but a *drop* to the *bucket* furnished by others.

Last spring I procured between five and six thousand eggs, which hatched about five thousand worms. Four thousand were of the two crop kind, and the remaining one thousand, the sulphur-colored six weeks worm. The two crop worms, which hatched first, began to wind in twenty-four days. They wound hard and valuable cocoons. And here I would mention, that no worms should be saved after twenty-fours from the time they commence hatching, a fact which I was not apprised of at the time mine were hatched. I saved *all*, and commenced feeding them, but soon ascertained that the later ones would accomplish but little. Some of them continued eating until the sixth week and then died, while others wound thin and worthless cocoons. All of the six weeks worms did well, and wound the best of cocoons.

I am not fully satisfied as yet which are the more profitable, the six weeks worms or the two crop; the former consume more leaves, are two weeks longer arriving to maturity, and produce more silk. The cocoons of the latter, reel stronger (at least mine did) and the quality of the silk, in my judgment, is equally as good. Mr. Danforth, however, states, in his communication "to the committee on silk, American Institute," that, "the large six weeks worm, either white or sulphur-colored, is altogether preferable to the two crop; for, not only are they more productive of silk, but from their superior length of thread, the reeler is able to produce silk of better quality, and with less labor."

I fed the white and native mulberry leaves alternately, as I could most conveniently gather them. The worms seemed to prefer the white, but were not at all backward in eating the native, for when in health, they are rather the most swine-like insects I ever became acquainted with. I had about one bushel of cocoons, and should think from what I have reeled, they would produce one pound of silk. The silk that I have reeled is of an excellent quality, strong, soft, and has a beautiful lustre. It was reeled on the *common* reel, and twisted on the *common* wheel, which are rather heavy and awkward apparatus for the business, however. I am fully satisfied with the result of the experiment, and am confident that the whole process of raising silk, from the rearing of the mulberry to the manufacturing of the cloth, can be done with ease and safety, and if carried on judiciously, will afford abundant profit to warrant any one an engagement in the business.

I am much pleased with the "Apparatus for feeding Silk Worms," likewise the "Apparatus for the worms to wind their cocoons on," recommended on the 44th page of the current vol. of the Farmer. This apparatus for winding, of Mr. Harvey Hammond, is, unquestionably, an excellent one, as the worms seem to prefer paper to almost any thing else. I have taken worms that have traveled about a half day on brush and other apparatus made for them to wind on, and put them in a piece of paper rolled in the shape of a cone, and they would commence winding immediately. At first, I had considerable difficulty in suiting the worms with places to wind on, so I went to work and made an apparatus somewhat similar to Mr. Hammond's, and found it answered the *very* purpose with this exception, many of the vacancies were altogether too large; the worms wound too much floss and too many dupions or double cocoons. I have of late noticed a "new cocoon frame," described on the 15th page of the 7th vol. of Genesee Farmer, which I consider an excellent plan.

Perhaps it may not be out of place to mention, in conclusion, that I have two trees of the Morus multicaulis inoculated into the white, that have thus far withstood the severity of the winter, and at the present time (March 9) but three or four inches of the tops have been injured by the frost. My thanks to W. W. B. for *so much* in this particular, and *much more* in many others. CULTOR.

YOUNG CATTLE---Their own Surgeon.

MR. TUCKER—Three years ago this month, (Feb.) I had a very fine young bull then coming two years old, which I found in my barn yard with his right fore leg broken, about half way between the knee and fetlock joint. The bone was not only broken but appeared to be shattered in pieces for several inches, and pricked through the skin. I got him up, and on three legs he worked his way, 6 or 8 rods, to an open shed, where he could be by himself. I splintered and bound up the leg as well as I could, and left him for the night; but in the morning the bandages were off. He had got up and moved about, and sometimes bearing on the foot, which had nothing but the skin and tendons to support it. I saw no way to manage it better, and gave it up for a bad job; sent for a man to kill him, and made ready to do so. But on further reflection, as he ate well and was contented to stay where he was, I concluded to let him live if he could, and see how he would manage it himself, and let the leg alone, made no attempt to doctor it any more—gave him water and feed as usual. He ate well and kept in flesh; would move about, 2 or 3 rods, and I have seen it bent at nearly right angles. No appearance of healing the bones in sight when the leg was bent, I concluded it would perish and come off. In this manner he continued until the first days of May, near three months, when I moved him to a pasture, having good shade and water. Then he adopted a course of conduct for himself; had his abode at a fine maple tree; would get up, feed round as far as necessary to get a good bite of grass, go to the water 2 or 3 rods, and back to his tree. In this way he continued about two months; was in good health, gained in flesh, and except the leg appeared fine. The leg had been enlarging some time, and now was double the size of the other at the place broken, but as yet had no strength, and would yield to pressure and bend about as he happened to hit or bore any weight upon it, and during this time several bones had worked out of the wound which still kept open, to which no medium or application whatever was applied, except his own tongue, which was very frequent. I saw him from day to day, and watched the progress until about the middle of July, when I found he could bear some weight on it, and was getting into shape; and about one month more it became strong; the wound had healed, and he walked as well as ever. The joints above and below perfect, the leg straight, the length exact with the other, and as good, but for the odds in size. He was in fine condition, competent for all purposes by September, and fought as good a battle as others I had of the same age. When coming four years old, I fattened and butchered him; and sawed up the leg and found an entire new bone had formed, of about 3 1-2 inches diameter, and graduated above and below so as to fit the former, and no appearance of the old one for six or more inches, which had doubtless been discharged as I stated above. It may be borne in mind, that this process was performed by nature, with aid of dumb reasoning, I call it, in nearly equal parts of cold and warm weather, which should, in some degree, account for the length of time to perfect it.

Also, I have now a fine three year old steer, which had his thigh broke by the kick of a horse, at about seven months old. Him I left to manage as he might.—He was in a distant pasture with a large lot of other young cattle. Took his own position wide from the rest, and in about two months he got well, and now no one, without a close examination, would suspect he had ever met with the accident.

These cases, the first in particular, in stating, I have gone much into detail, as it is the first I have seen, and one of the very worst kind. Therefore, I considered it of some importance that any may know that young cattle in such situations, if left to themselves, will prove their all sufficient surgeon. JNO. SANFORD.

Marcellus, March, 1839.

Report of the Committee on Root Culture.

The committee appointed at the last meeting of the Society, to "report on the best vegetable or root crops for feeding cattle, and the best means of cultivating the same," report as follows:—

The culture of roots, as farm crops, for feeding and fattening domestic animals, is of such recent introduction, and so limited, among us,—and the few experiments that have been made, to ascertain the relative value of these roots, have been so loosely managed, that the committee do not possess the data that they could desire, to make a satisfactory report, adapted exactly to our practice. But they are nevertheless satisfied, from the numerous experiments which have been made in Europe, in a climate very similar to our own, and from the partial ones which have been made among us, that the culture of roots is destined to effect here, what it has effected elsewhere—a great and salutary change in husbandry, not only as furnishing the easiest and cheapest means of feeding and fattening domestic animals, but as an important source of fertility to the farm, and of securing the main point—ultimate profit, to the owner or cultivator.

Under these strong impressions of the advantages of encouraging and extending root culture, your committee proceed, with the limited means at their command, to fulfil the duties assigned to them by the Society.

The Highland Agricultural Society of Scotland have recently awarded liberal premiums for experiments in fattening neat cattle,—*first*, upon different kinds of roots, as the potato, turnep, and mangold wurtzel;—*second*, upon raw and cooked food; and *third*, upon roots entirely, and a mixture of roots, grain, pulse and oil-cake. These experiments have been made with a view of accurately ascertaining the comparative value of each kind of root and other food, and the economy of each mode of feeding it. The experiments have been numerous. They have been made upon ten to thirty head of cattle at a time; and they have been continued from three to six months. The animals were weighed or measured at the time of starting the experiment, at the close of it, and generally at intermediate periods, particularly when the food was varied; and the quantity of roots and other food given was accurately noted,—so that the result has indicated the relative value of each kind of food in the fattening process, and the best mode of feeding it. The committee proceed to state, in a summary way, the results of some of these experiments.

1. *The relative value of different roots.*

Mr. Howden, with a view to the experiment, set apart the product of two acres of mangold wurtzel, amounting to fifty tons; five acres of Swedish turneps, being 140 tons; and two acres of potatoes, weighing 29 tons 4 cwt. The experiment was made with 21 head of cattle, which received, in addition to the roots, a few distillers' grains and a little straw. The following table shows the roots appropriated to each lot, and the monthly increase of the animals in girth. The abstract is made from the prize essays of the society, which cannot now be referred to; but the impression is, that in all the

experiments which we quote, the roots fed to each lot were precisely the same in weight. Lot No. 1 was fed from the product of one acre of potatoes, one acre of mangold wurtzel, and one acre of Swedish turneps;—No. 2 from one acre of potatoes and two acres of Swedish turneps; and No. 3 from one acre of mangold wurtzel and two acres of Swedish turneps.

Date.	Lot No. 1.	Lot No. 2.	Lot No. 3.
1831, Nov. 30..	35 ft. 8 inches,	35 ft. 9 inches,	35 ft. 8 inches,
Dec. 30..	36 " 6 "	38 " 7 "	36 " 6 "
1832, Jan. 30..	38 " 2 "	38 " 4 "	38 " 2 "
March 1.	39 " 7 "	39 " 8 "	39 " 6 "
" 30.	40 " 8 "	40 " 10 "	40 " 6 "
April 30.	41 " 4 "	41 " 7 "	41 " 3 "

Twenty-eight tons of mangold wurtzel and Swedish turneps were withdrawn to feed other stock.

On the 30th January Mr. Howden took a pair of cattle out of each lot, and fed No. 1 with potatoes and water, No. 2 with Swedish turneps, and No. 3 with mangold wurtzel. The following shows their relative increase in three months.

Date.	Lot 1 Potatoes.	Lot 2 Swed. turneps	Lot 3 Man. wurtzel.
1832, Jan. 30,...	10 ft. 8 inches.	10 ft 5 inches.	10ft. 4 inches.
April 30,..	11 " 6 "	11 " 3 "	11 " 2 "

When the cattle were sold, the purchasers agreed that the lot fed on Swedish turneps were from 7s. to 10s. ($1.54 to $2.22) a head better than the other lots. The average advance upon the original value of each, was £6. 12, and the cost of the grains being deducted, there remained £120 ($532.80) in return for the eight acres of produce consumed, or $66.60 for each acre.

From the above statement it would seem there is no great difference in the fattening properties of the three kinds of roots; and that so far as measure or weight is concerned, it matters little which are employed in feeding. We will note here for future reference, the product per acre, of each kind of roots, upon Mr. Howden's ground, adding the product in bushels of 56 lbs.

The potatoes gave 12 tons 4 cwt. equal to 288 bushels.

The mangold wurtzel 25 tons equal to 1000 bushels.

The ruta baga 28 tons, equal to 1,120 bushels.

2. *The comparative economy of feeding raw or prepared food.*

In 1833 the society offered a premium of 30 sovereigns for the best report, founded on actual experiment made for that purpose, on a number of oxen or heifers, not fewer than six, the animals to be of the same breed, age and sex, and the term of feeding not less than three months. Several reports were received and published in 1834. From these we abstract the following:

Mr. Walker made his experiment with six two year heifers, and four two year old steers. Each parcel was divided into two lots, and fed on like food, except that one half received their food raw, and the other half in a steamed or cooked state. The food consisted of Swedish turneps, potatoes and crushed beans, with a little salt and straw. At the end of three months, it was found that the three heifers fed on steamed food had gained 48 1-2 stone, or 679 lbs., and the three heifers fed upon raw food had gained 45 1-2 stone; but the quantity consumed by the first lot exceeded that of the latter.

Cost of feeding on steamed food, .. £14 1 3
" on raw food,.....10 8 7 1-2

The first cost more than the last,.....3 14 8 1-2

Deducting the first cost, and the price of fattening from the price paid by the butcher, there remained a profit on the three heifers fed with steamed food, of 9s; while the profit on the three fattened with raw food, amounted to £3 10s 6d. By a like estimate, the loss on the steers fed with steamed food was 3s 8d. and the profit on those fed with raw food 10s. 6d.

Andrew Howden made a like experiment with 18 cattle in six lots. Their increase and expense of keeping for three months, from the 20th March to the 20th of June, were as follows:

	Incr. in lbs.	*Expense.*
Three heifers on raw turneps,.....	392	£6 18 0
" on steamed turneps.....	532	8 18 9
" on raw potatoes,.....	600	10 7 0
" on steamed potatoes,....	572	10 7 0
Three steers on raw potatoes and corn,	722	9 4 0
" on boiled potatoes and corn,	689	9 5 0

John Baswell fed ten horned cattle. The expense of keeping the five cattle on raw food was £32 2 1, while that of the cattle on prepared food was £34 5 10. On being slaughtered the two lots appeared to be very similar, but the particular weight is not mentioned.

3. *Relative economy of feeding with turnips alone, or with turnips and other more expensive food.*

Robert Stevenson was the successful competitor for the society's premium. He took 18 oxen; their live weight was ascertained at the beginning, at the end, and at intermediate periods of the experiment, which continued 119 days. The cattle were divided into three lots of six beasts each, and a correct account was kept of the weight of food consumed by each lot. Lot 1, was allowed lintseed cake, bruised beans, and bruised oats, in addition to turnips, and during the last 24 days of the experiment, 20 lbs. of potatoes were given per day to each. Lot 2, received the same allowance except the lintseed cake, and half the potatoes. And lot 3, was fed upon turnips alone. The cost of the keep of each animal, during the 119 days, was as below:

Total cost of feeding one beast of lot 1.....£5 2 7
do do do of lot 2,.....3 17 0
do do do of lot 3,.....1 18 7½

The improvement in live weight was as follows:

First lot increased in weight.....108 stone.
Second do do.....101 "
Third do do..... 49 "

Abstracting the cost of feeding from the value of the increased weight, the loss and profit would stand as follows:

Loss on feeding lot 1,.....£3 15 8¾
Profit on feeding lot 2,..... 1 19 3½
Profit on feeding lot 3,..... 2 11 1

"Thus, when turnips alone were used, a profit of twenty-two per cent was realized; where beans and oats were used along with the turnip, the profit was diminished to eight and a half per cent; but when still more expensive food was tried, that is, grain and lintseed cake, along with turnips and potatoes, a loss was sustained of no less than 12 3. 16 per cent."

Lot 1, were the largest oxen. They were fed each with 132 lbs. per day of Swedish turnips; lot 2, were fed each with 120 lbs. of the same per day; and lot 3, being the smallest, received but 115 lbs. per day, and for twenty-four days but ninety-two pounds.

Lot 1, cost 4,484 pence for every lb. of increased live wt.
Lot 2, " 3,92 " " "
Lot 3, " 3,39 " " "

The turnips were estimated at four pence per cwt; the potatoes at 1s. 6d. per cwt.; oats and beans at 3s. 6d. per bushel, and lintseed cake at three-fourths of a penny per pound.

"In conclusion" says Mr. Stevenson," on this part of the subject, "we give it as our opinion, that whoever feeds cattle on *turnips alone*. will have no reason on the score of profit, to regret their not having employed more expensive auxiliaries to hasten the fattening process."

It would seem pretty evident, from the forgoing experiments, that ruta baga and mangold wurtzel are the best root crops for feeding cattle. The profit of cultivating and feeding these roots will be more manifest, if we compare their acreable product with that of hay, potatoes, and the coarse grains which we feed for fattening animals. To enable the committee to make this comparison, they assume the following as the average products of crops, and attach to each of these an estimate of their marketable value. Both the product and the prices will greatly vary; but those assumed are deemed sufficiently correct for comparison.

An acre of grass,	2 tons	at $10.....	$20 00
do corn,	40 bushels	at 75 cts.....	39 00
do oats,	30 do	at 37½ cts... ..	11 20
do buckwheat,	30 do	at 50 cts.....	15 00
do potatoes,	150 do	at 25 cts....	37 50
do ruta baga,	600 do	at 25 cts...	150 00
do man. wurtzel	600 do	at 25 cts...	150 00

Estimating the cost of the roots, in labor, at twenty dollars an acre more than that of the hay, oats and buckwheat, it still leaves a great disparity in the profits, and considering the cost of culture equal to that of Indian corn, there is a manifest advantage in the turnips and mangold wurtzel over the corn crop, as a material for cattle food. Good beef cannot be made on hay alone, in winter; and those who do not feed roots, must resort to some more expensive food, as the meal of Indian corn, oats, buckwheat, &c. The turnips and mangold wurtzel, on the contrary, with the aid of perhaps a little straw, will serve themselves to feed and fatten animals.

In this matter the chairman can speak from experience. He purchased four oxen a little before Christmas, and kept them till some time in April; after a short time, they ate each two bushels a day of ruta baga—they would eat very little else, though laid before them, not even lintseed cake. They made good beef, and afforded a handsome profit on the turnips consumed.

If we now assume that an ox will require a quarter of a hundred of hay per diem to keep him in good condition, and that it will require an addition of four quarts of corn meal, or eight quarts of crushed oats or buckwheat, per diem, to fatten him; and if we consider 112 pounds or two bushels of roots equivalent to a ration of hay and grain, then the several crops will feed an animal as below.

One acre of grass, and half an are of corn will feed.....160 days.
One and a half acres of mangold wurtzel, or Sweedish turnips will feed.....450 days.
One acre of grass, and one acre of oats or buckwheat will feed.....160 days.
Two acres of Swedish turnips or mangold wurtzel will feed.....600 days.
One acre of potatoes will feed.....75 days.
One acre of Swedish turnips or mangold wurtzel will feed.....300 days.

Making very liberal allowance for the difference in the expense of raising these crops, and for any error the committee may have made in fixing the daily rations, or in the acreable produce of each, they think that no doubt can for a moment be entertained, that the Swedish turnip and the mangold wurtzel are decidedly the best crops that can be raised for feeding and fattening cattle.

The committee have no doubt that the sugar beet and the carrot offer advantages nearly or quite equal to the roots above recommended. Their product and nutrient properties are very similar, and the expense of culture is not very dissimilar. The sugar beet is probably richer in nutriment than the mangold wurzel, though its product is ordinarily less. The carrot may require more labor in the culture; but it is superior as food, particularly for horses.

Arthur Young highly extols the carrot. Upon the product of three acres of this root, he assures us, he kept for more than five months, twenty work horses, four bullocks, and six milch cows; nor did the animals, during that period, he adds, taste any food, except a little hay. Our enterprising fellow-citizen, Col. Meacham, of Oswego, has gone largely into the culture of carrots, as cattle feed, as well as many of his neighbors; and they speak highly of the profits of the culture.

Some highly satisfactory experiments have also been made among us, on a limited scale, in cultivating and feeding the sugar beet. There seems to be little doubt, from the high state of perfection and of profit, which the business has arrived at in France and Germany, that the culture of this beet will soon be extensively gone into in this country, for the purpose of making sugar; and if so, the residium of the beet will form an important item in the material for fattening cattle.

There are other advantages resulting from root culture which should not be overlooked. It tends greatly to increase the quantity of manure on the farm, to meliorate the texture of the soil, and to furnish excellent alternating crops in convertible husbandry. In selecting for culture, the farmer should choose the roots that are best adapted to his soil. The turnips prefer a dry sandy soil; the beet a clay loam.

As to the best means of cultivating these crops, the committee summarily remark, that the product and profit will materially depend upon the following contingencies, viz: that the soil be dry; that it be rich; that it be deeply worked; that it be well pulverized; and that the after culture be well managed. The implements necessary to cultivate them advantageously, in addition to the plough and harrow, are the drill-barrow and cultivator. The season for sowing the beet is from the 10th to the 20th May;—of sowing the Swedish turnip, from the 10th to the 25th June. The drill or row culture is decidedly the best. A detail of the whole process of culture would occupy too much space for this report, and is unnecessary, as these processes are already understood by many, and have been minutely described in the agricultural periodicals of the day. The committee will merely recommend in conclusion, that the roots be always cut, previously to being fed to cattle, for which machines may be procured, at a moderate charge, which will cut a bushel in one to three minutes. If cut, the roots are eaten entirely: if not cut, a portion is apt to be rejected and wasted.

The chairman has received a communication from Col. Meacham, stating his mode of cultivating the carrot, the product, and manner of using the crop. He cultivates them in drills, from 20 to 24 inches apart—he gets one thousand bushels an acre, at an expense of $25 to $30; he kept six work horses on them from Nov. 1836 to June 1837, without grain, and they remained in good plight, and performed as well as he ever had horses perform—and he thinks they are worth double as much for stock as ruta baga.

Upon the subject of the carrot culture, which is perhaps less understood among us than that of the beet and turnip, the committee will add, that this root thrives best in a sandy loam, light, moist, but not wet, and of great depth; in which the plough, going to the beam, brings to the surface nothing that is not fit for vegetation. The ground should be ploughed immediately preceding the sowing. In Suffolk, Eng., they sow 8 lbs. seed, broadcast, to the acre; and the crop is from 400 to 500 bushels. To horses they are considered superior to any other food. Two bushels of carrots and one of chaff is the per diem allowance to a horse; or 7 bushels of carrots and one bushel of oats is the allowance for a week. They are also profitably fed to all other farm

stock. They are raised in Suffolk without dung, at an expense of 9d. (16 cents) per bushel. The yield of the carrot is often 700 to 1000 bushels the acre. The crop is gathered by making a deep furrow near to the drill, when a man seizes, draws the top to the furrow, and pulls them up with great facility.

Another root, the parsnip, is deserving of notice, though its partial culture hitherto, will hardly entitle it to be classed among field crops. It is believed to be the most nutritious root of any that have been named; is as easy cultivated as the carrot or the beet; and has this advantage over all the others, that its value is not impaired by frost.

From the preceding views, the committee do not hesitate to recommend the extention of root culture, as the most ready means of keeping up the fertility of our farms,and of increasing the profits of their cultivation.

J. BUEL, *Ch'n.*

ROOT CULTURE—THE POTATOE.

Every farmer cultivates the potatoe, but few farmers cultivate it as profitably as they might. The average crop does not probably exceed one hundred bushels an acre. It may be made to exceed three hundred bushels the acre, and without increasing, materially, the expense of culture. It is a reproach to us, that this root is brought three thousand miles—from England, Ireland and Germany, to supply the wants of our city population. Let us try to do better. It is in the hope that we may contribute to increase our average product, so as to supply the demands of our market, that we give the following directions for its culture.

Soil and preparation.—A mistaken notion prevails with many, that the best potatoes are grown on a warm sandy soil. The reverse of this is true. The best potatoes, as to quality, are believed to be grown in the west of England, Ireland, Nova Scotia, Maine, and other high latitudes, and particularly in humid climates. In a dry season, the quality and quantity are inferior with us, to what they are in a moist and cool one. The potatoe zone does not extend south of New-York—that is, its quality deteriorates south of that latitude; and it probably has the most congenial climate between 42° and 45°. If these assumptions are well founded, then it should be our aim to plant upon a cool and moist, though not wet soil, which approximates nearest to the temperature of the best potatoe-growing districts elsewhere.—The potatoe will grow any where, if there is vegetable matter and moisture, but it will be inferior upon dry sands and stiff or wet clays. It does best in loams, or reclaimed swamps; and it pays well for a good dressing of long manure, and should, if practicable, be planted on the first furrow of a grass ley. If the sod is old and tough, plough deep in September, having first spread the manure, if to be had at the time; but if the ley is one of clover, of one or two years old, the ploughing may be postponed till spring. If ploughing in September, without manure, this may be spread upon the ground just before planting, and buried with a light furrow so as not to turn up the vegetable matter of the sod. In our practice of always sowing clover with small grains, we seldom fail of having a tolerable grass ley for the corn and potatoes which are to follow; and its value to the crop doubly compensates for the cost of the clover seed. The potatoe has a system of roots which strike deep, if the soil will permit, to collect food for the plant. A decomposing sod, with the manure which should accompany it, turned with a deep furrow, affords the best aliment for the plant, and is deposited where the roots naturally seek it, and where it remains cool and moist. The stolens have a different office to perform. They require more air and heat, shoot horizontally, and if buried deep in culture by the plough will protrude a new set near the surface. So that a rich deep soil, having a good sod and a mellow surface, is best adapted to this plant. Harrow thoroughly before planting.

Manures.—The value of manures to the potatoe crop was illustrated in the preliminary remarks in our last number; and indeed a large crop is seldom obtained without this auxiliary. Long or unfermented manure is preferable to that which is rotten. And remember, this manure does not become more impaired in value for the crop which is to follow the potatoes, than if it were summer-yarded. We prefer applying it broad-cast, with an unsparing hand, previous to the last ploughing; and we approve of Mr. French's practice, of sowing plaster upon the manure, instead of afterwards applying it to the growing plants.

Seed.—A thousand and one experiments have been made, and with various results, to determine the relative value of large, medium or small seed—of cut or whole tubers. We think the majority of these experiments is in favor of medium, or a little more than medium sized roots, for seed, cut into sets of two or three eyes. On the principle that like produces like, such a seed will produce a crop of the most desirable size for the table.—Each eye forms a distinct plant, like a kernel of corn, and the size of the tuber, and not of the set which is taken from it, will give character to the product. If the variety has a dwarf habit of growth, more sets may be put in a hill, or they may be planted nearer in the drill, than where the growth is tall, or where the tops send out many lateral shoots. Rich ground will also sustain a greater number of plants than poor ground. The Rohan, and we are told also the forty-fold, require thin planting. The object should be to give the plants a good pasture, and not to have the tops so thick as to exclude the solar rays from the soil.

To produce early potatoes, or to bring a crop to early maturity, it is advised to gather the seed before it has attained maturity, to expose it some days to the influence of the sun, and to select the top ends for the earlier crop. We have a strong illustration of the correctness of these conclusions, in Loudon's Gardeners' Magazine. A correspondent of that journal made the following experiment: He dug every other row of a potatoe patch for seed while the vines were fresh, and exposed them in the sun until they had become green. In February, he cut them crosswise, leaving the bottom and top in separate sets. He cut those which had been suffered to ripen in a similar manner, and planted the four kinds in alternate rows. They were all planted on stable litter, and covered with about three inches of earth. A part of each kind received no subsequent earthing. We give the result in the writer's own words.

"The early potatoes not earthed up, grew close around the stock or stem, like eggs in a nest, and so near the ground that they might be picked off with the finger, leaving the stock or stem uninjured, to produce more potatoes from the runners. From the eye sets of the unripe tubers, we had a supply every day for a fortnight; when those of the bottom sets came into use for another fortnight; at that time potatoes from the eye or top sets from the ripe seed came into use, and were succeeded by potatoes from the bottom sets of the ripe seed. Those kept for seed, or the table, were earthed up as usual, and each row produced almost as large a crop as any two rows not earthed up—the luxury of an early potatoe being a greater object than the quantity."

Choice of sorts.—There is a difference of nearly one half in the nutritious or fattening properties of different varieties of the potatoe. Those which are best for table are best for market, and best for farm stock, though their yield is generally less than that of the coarser varieties. Those in the highest esteem are the Pink-eyes, Mercers, Sault St. Marie, St. Helena; and almost every district has its other favorites. The Rohan, we think, will ultimately obtain the ascendancy, on account of economy in seed, its yield, and its intrinsic merits.

Mode of planting.—Three modes are practised; in hills and in drills, as a distinctive crop, and in alternate double or threble rows with Indian corn. The propriety of planting in hills or drills depends upon the condition of the soil; if it has been thoroughly subdued by the plough, drills are to be preferred, as they are cultivated with the least expense and generally give the largest product, though they in general demand the most labor in gathering the crop. The practice of raising potatoes with corn, by alternating two or three rows of each, has been eminently successful, where it has been conducted with spirit: the product of the mixed crop has been greater than where each has had a separate department of the field. We omit to notice the Irish mode of planting in beds, as involving an economy in land which we do not require, and an expenditure of labor which we cannot afford. The seed should not be buried more than three or four inches—and the covering should be least in wet ground.

Culture.—The culture of the potatoe, to be profitable, should be almost wholly performed with the plough, cultivator and harrow—little other labor being required with the hand hoe, than may be barely sufficient to destroy the weeds which these implements do not reach. In the first place, the seed may be covered with the plough, whether in hills or in drills. In the next place, the harrow should be used, before the plants are above ground, to reduce the ridges made by the plough in planting, to pulverize the surface, and to destroy the young weeds. In the third place, the cultivator, or the plough, turning a superficial furrow *from* the plants, may be introduced, when they are not more than six inches above the surface. In the fourth place, the plough may be used to turn a light furrow *to* the plants so as to give their stems an earthing of three or four inches; but the plough should run twice nearly in the same track, that the ridges upon which the crop grows may be rather flat and broad than pointed—rather concave than convex—calculated rather to retain, than to throw off water. Here the hand hoe may be of use in gathering around the stems a portion of the earth raised by the plough, in destroying weeds among the plants, and in perfecting the earthing or hilling process; for the crop should receive no further earthing after the plants are in blossom, when the stolens have shot forth, and the tubers began to form.—Earthing after this time causes a new set of stolens near the surface, and a growth of a new set of tubers, which, in a measure, rob the original ones of their food. We have seen, by the experiments quoted, in raising early potatoes, that the natural place for throwing out stolens, or roots which produce the tubers, is the point of the stem which first comes to the light and atmosphere; that if this point is covered in due time with two or three inches of mould, stolens are protruded into it, which produce the potatoe; but, that if this earth is wanting, the stolens cannot protrude, but that the potatoes grow at the surface, around the stem. After the earthing process described, no further care is required, than to destroy weeds, which may be done with the hoe, or, if long omitted, by the hand.

In harvesting the crop, although we have made much progress in improvement, much remains to be done. The hoe, the dung-fork, the spade, the potatoe hook, and the plough, followed by the harrow, have each their several advocates. From our experience, we should choose the last first, and the first last, where the crop is in drills; and we should prefer the hook where it is in hills.—With the potatoe hook, when the crop has been in hills, we have thrown out 14 bushels of pink-eyes in an hour, and 27 bushels of the Rohan, though in neither case, did we gather the potatoes—but in both cases, the digging process was thoroughly done. Lawson & Son's potatoe lifter, figured and described in the August number of our last volume, very much on the model of one before introduced by Capt. Joab Center, seems to be calculated to abridge the harvest labor of this crop. But of this we hope to be able to speak more understandingly another year.

Sorting the crop.—This is an economical process, though little attended to, and may be more profitably done before the crop is housed, or pitted, than afterwards. There is a portion of the crop, often a fourth or a third, which is small, and unfit for the table, for market, or for seed, but which is as good as the large size for farm stock, and which can be economically used for this purpose, in fattening hogs and beef cattle, in autumn and winter. If they are separated at the harvest, they are always in readiness; if not, the sorting is tedious, or is neglected, and the small potatoes are the last that remain, either for the table, or for seed. With us the work is a trifling affair. We have a wire sieve, or riddle, the meshes of which are of a size to admit those of a given size, appropriated to swine or cattle, to pass through. As the crop is brought home, a peck is thrown into this riddle, and by shaking it half a minute, the sorting is completed.

Wintering the crop.—The best mode of preserving potatoes in perfection through the winter, is to bury them in shallow pits, in a dry and porous soil—a side hill is the best—where they will be free from water, and to cover them first with straw, and then with earth, and if convenient, coarse manure over the earth, so that they shall be secure from frost. When put in pit or cellar, they should be dry, that is, free from external moisture. Potatoes put into the cellar should be kept as cool as possible without freezing, and air should be excluded by a light covering of mould or sand. A dry warm atmosphere will speedily impair their good properties.

In using potatoes, they are improved by boiling, especially for pigs. The potatoe belongs to a family of poisonous plants, the *solanum;* the boiling or steaming of which is believed to expel the deleterious, and to improve its nutritious properties. To neat cattle and horses they may be fed raw with manifest advantage. In cooking them for the table, it is preferable to do it by steam. The mode of doing it is simple. Get a piece of sheet iron of the size of the bilge of your pot or kettle, perforate it with half inch holes, then clip off two parallel sides so as to admit it into the mouth of the vessel; put it in; put some water *under*, and some potatoes *over* this perforated iron; and when the water boils, the potatoes will be steamed and prepared for the table: or, if to be boiled, put them in the vessel while the water is cold, that they may heat through as the temperature of the liquid increases—that the inside may cook as well as the outside—and when they are near being done, turn off the water, remove the cover, and leave them to dry over a moderate heat.

We will close this article, already longer than we intended it should be, by giving the culture, expense, product and estimated profit, of two crops raised by ourselves, in different years, upon the Albany barrens, the soil a sand loam.

Culture.—The field was in clover. We applied twenty-five loads of long manure, in May, to an acre, and dropped it at suitable distances for spreading; marked out two lands of equal breadth, twenty feet; and having the seed prepared, proceeded to planting, which occupied three men, a boy and team three half days. One man took charge of the team; a second raked the manure into the furrow, and trod it down as he went on; and a third spread the manure, and with the boy dropped the seed. The rake followed the first furrow, and the manure from two and a half feet surface was drawn in to it, and the sets, or seed, dropped at eight inches distance on the manure. The plough followed and turned three furrows, or made three bouts. In the meantime the manure and seed were deposited in the first furrow

of the second land, to which the plough followed, and in this way they alternated till the planting was completed. The ground was then rolled, harrowed as the plants began to break the surface, and subsequently ploughed between the rows, and hand hoed once. About half the field was a dry sand knoll, which suffered severely from drouth; and the crop here was but a little more than fifty per cent of the other half. The product was ascertained by the agricultural committee, and the product stated embraced the average of the entire acre.

EXPENSE OF EXPERIMENT I.

Man and team 1½ days, ploughing in seed,.....	$2.00
Two men and boy planting same,.....	2,00
25 loads manure, at 75 cents,.....	18,75
25 bushels seed, at 50 cents,.....	12,50
Rolling, harrowing and ploughing,.....	1,00
Hand hoeing once,.....	1,50
15 days taking up crop, (a long time,).....	11,25
Rent,.....	5,00
	$54,00

PRODUCT.

359 bushels large potatoes, at 50 cents,.....	$179,50	
71 do small, at 12½ cents,.....	8,88	
		$188,38
Deduct charges,.....		54,00
Nett profits in experiment 1,.....		$134,62
At 2s. a bushel the nett profit would have been.....		45,25

EXPERIMENT II.

Culture.—This crop has been preceded by wheat. It had 25 loads of long manure, spread and ploughed in. The ground was then harrowed, furrowed or listed with two and a half feet intervals, the seed dropped at eight inches, covered with a plough, a furrow on each side, and the ridgelets rolled. The after culture consisted of two horse and hand hoeings. The crop was harvested with the plough and potatoe hooks. The product was determined by the agricultural committee.

EXPENSE.

One ploughing,.....	$2,00
25 loads manure, at 75 cents,.....	18,75
25 bushels seed, at 50 cents,.....	12,50
Harrowing, furrowing, rolling and horse hoeing,.....	3,00
Planting and covering, 3 days,.....	2,25
Hand hoeing, 2 days,.....	1,50
Taking up crop,.....	9,00
Rent,.....	5,00
	$53,90

PRODUCT.

383 bushels merchantable potatoes, at 50 cents,....	$191,50	
77 do small do at 12½ cents,..	9,62½	
		$201,12½
Deduct charges,.....		53,90
Nett profits,.....		$147,22½
At 25 cents per bushel, the profit would have been about....		52,00

In these estimates, the whole manure is charged to the crops. Deducting one half, as is customary, the profits would have been $9,37 1-2 more in each experiment.—*Cultivator.*

Of the Diseases in Swine.

A hog is a very bad creature to doctor, therefore to prevent their diseases, should be an object of our attention.

Keep him well if you can, but not so as to burthen him with fat in hot weather; keep his body open, and there will be little danger of his being sick. Brimstone in small doses, is excellent for a hog; antimony is also good; but if you can get neither, chamber ley put in their swill, will answer a good purpose. It is necessary to keep hog's issues open. The practice of feeding store hogs three times a day is not good; whereas if they are fed only morning and night, they keep their appetite, eat their food clean, and grow the faster.

To cure the measles in swine.—It sometimes happens, though seldom, that swine have the measles; while they are in this state, their flesh is very unwholesome food. This disorder is not easily discovered while the animal is alive, and can only be known by its not thriving or fattening as the others. After the animal is killed and cut up, its fat is full of little kernels, about the size of the roe, or eggs of a salmon. When this is the case, put into the food of each hog, once or twice a week, as much crude pounded antimony as will lie on a shilling. This is very proper for any swine, even though they have no disorder. A small quantity of the flour of brimstone, also may be given among their food when they are not thriving, which will be found of great service to them. But the best method of preventing disorders in swine, is to keep their sties perfectly clean and dry, and to allow them air, exercise, and plenty of clean straw.

Another.—Rub them all over with a stiff brush dipped in cold water, then boil parsley roots and rue in salt water and give it them to drink.

For Catarrhs.—Take two ounces of coriander seed, one of ginger, three of honey, and half an ounce of turmerics, let it be powdered fine, and boiled in three quarts of new milk, then let the hog drink it.

Of Dreaches.—It is a practice among people in general, when their hogs are sick, to put a rope in their mouths and hang them up to drenching. This is a very bad practice—for while you are pouring your medicine down, the hog will squeak, and ten to one the liquid goes down the windpipe and choaks him. If you can give him the medicine in milk or some other food, that he will drink, it is well; if not, do not force it down in the manner of drenching but give it to him in the form of a glyster. This is always safe and as effectual as any method whatever.

Issues.—The issues in a hog, are places on the inside of their legs, which are porous, like a pepper-box top.—Here, it seems, is the most immediate outlet for the superfluous fluid of the body; when these get stopped (as hogs are fond of filth and mire) the hog loses his appetite, and becomes sick; then to drenching and choaking as before hinted; whereas, if his issue were rubbed and picked open, he would immediately recover.

For a fever.—Let them bleed in the tail, and give them thrice a day, water wherein pepper and parsnep roots have been boiled.—*Me. Farmer.*

Improved China and Berkshire Pigs.

THE subscriber keeps constantly on hand and for sale the above very superior hogs. They are the very choicest kinds of England and America, and are universally preferred by all who pay the least attention to the improvement of their stock.

The Berkshires are large, easily weighing 400 to 600 lbs., according to keep, at 18 months old, and grown hogs of this breed have been sold the past year in Kentucky from $200 up to $500 per pair. The China are a smaller race and much finer in their points than the Berkshire, and weigh at 18 months 300 to 400 lbs. They are celebrated for the delicacy of their meat, easiness to keep, and aptitude to fatten, and for producing a more rapid improvement in crossing with the common hog than any other breed known.

If called upon, the subscriber will give the most satisfactory reference of the perfect purity in blood of the above animals, and the superiority and care of his breeding, and residing as he does at the great shipping port of the lakes, Western gentlemen, in addressing their orders to him, will make a considerable saving in the charges of feed and transportation.

Prices of Berkshire pigs per pair, 6 to 8 weeks old, caged and shipped,.....$20 00
China do.,.....15 00

When taken at the farm without box, $2 per pair less will be charged. Crosses of the above with each other called the Tuscarora, and in England the Tonkay breed, at 15 to 20 dollars per pair.

Pigs will not be considered as engaged unless the amount of them is remitted at the time of ordering, or reference given. *Address, post paid,* A. B. ALLEN.

Buffalo, March, 1839.—mar 9-m3t w9t

Morus Multicaulis.

FOR SALE—One thousand five hundred genuine Morus Multicaulis trees, with cuttings on them; they are of thrifty vigorous growth, the wood well ripened. They are choice trees.

Also, 10,000 Morus Multicaulis cuttings for sale, if applied for soon.

Fruit and Ornamental Trees, Shrubs, Green House Plants, &c. for sale as usual. ASA ROWE.

Greece, Monroe Co., March 7th, 1839. m1tw0t

New Arrangements.

THE subscriber would respectfully inform the public, that he has taken the entire management of the Rochester Seed Stoe. Having had seven years' experience in the business in this place, he flatters himself that his knowledge of the wants of the community, and his facilities for supplying those wants, will enable him to give the fullest satisfaction, and secure for the establishment a continuance of that public confidence and liberal patronage which it has hitherto received.

He has now on hand a very large assortment of English and American Garden, Field and Flower Seeds, of the best kinds and latest growth, and several tons weight additional will be received direct from England on the opening of navigation.

The regular agents for the establishment will be supplied immediately.

Catalogues may be had gratis on application.

Rochester, March 1st, 1839. M. B. BATEHAM.

Holland's Improved Silk Spinner.

THE attention of Silk Manufacturers is invited to the recent invention of an improved Silk Spinner, by Mr. Harrison Holland of this town, for which he has obtained letters patent. It is thought to possess many advantages over any machine now in use for the same purpose. By its peculiar construction, it can be moved by hand, steam or water power,—and doubles, twists and spins the silk at one operation. For family use, or persons wishing to manufacture silk in a small way, it is undoubtedly the best invention in use, while it is equally well adapted for factories on the most extensive scale.

A machine in full operation may be seen, or for a more particular description of it reference may be had to a Circular published by the subscribers, which can be obtained by any one upon application either to HARRISON HOLLAND, or STODDARD & LATHROP.

Northampton, Mass. Feb. 27. mar 9-f6t

WM. PRINCE & SONS will make sales of trees and cuttings of the genuine Chinese Morus multicaulis, Morus Expansa, Alpine, Broussa, Canton, and other varieties, deliverable to the purchaser at such period in the spring as is convenient to them, and will enter into contracts accordingly. Prices and terms for the trees and cuttings will be forwarded to all who may apply for them by mail, as well as prices of Silk Worm Eggs, Mulberry seed, &c. The Multicaulis Trees are remarkably vigorous, and as we first imported the genuine tree, purchasers are sure of obtaining the true kind. It is from this cause and from the great attention paid by them, that the trees they have sold have given universal satisfaction.

N. B. Fruit and Ornamental Trees, Plants and Seeds, can be supplied to any extent, and all articles will be packed so as to support any voyage and be forwarded in the most careful manner.

Flushing, near New York, Feb. 12, 1839. feb23 10t

Morus Multicaulis.

FOR SALE—1,000 genuine Morus multicaulis.
10,000 cuttings do. do.
100,000 Silk Worm Eggs.

ELLWANGER & ROGERS, Florists and Nurserymen, offer at wholesale and retail, a general collection of Green house and Hardy, Herbaceous Plants, Fruit and Ornamental Trees, Shrubs, Vines, Bulbous Roots, &c. &c.

Green-house corner of Buffalo and Sophia-streets, Rochester New York. March 9-3t

Cleveland City Seed Store,

AND WESTERN RESERVE AGRICULTURAL REPOSITORY, No. 91 SUPERIOR STREET, CLEVELAND, OHIO.

The subscriber, in introducing to the Public notice, the above establishment for its second year, takes pleasure in being able to state that from the apparent good feeling entertained of the advantages of such a Store to the State of Ohio, and the neighboring, States, he has greatly extended its sphere of usefulness, by adding to it a much more general assortment of all the valuable varieties of CLOVER, GRASS, ESCULENT ROOTS, and FIELD SEEDS, GARDEN, FLOWER, SHRUB and TREE SEEDS. And he has made such arrangements with his connections in Europe, as will ensure the early introduction into Ohio, of all new and desirable varieties that will be suited to this climate, and that he will invariably continue to offer only imported seeds that have been confirmed by experience to be better adapted to our use, than the same varieties raised in America. He particularly calls attention to his choice stock of GARDEN AND FIELD PEAS, TURNIPS, RUTA BAGA, SUGAR BEET, and MANGEL WURTZEL SEEDS—all imported from the best Foreign sources. He has added an AGRICULTURAL IMPLEMENT DEPARTMENT, consisting of Ploughs of various patterns, also Plough Castings, Cultivators, Drill Barrows, Hay and Straw Cutting Machines, Root Slicers, Harrows, Scythes, Cradles, Reaping Hooks, Rakes, Forks, and Grindstones of superior fine grit, Garden Tools, as Spades, Rakes, Hoes, Garden Lines, Pruning Hooks, Knives and Chissels, Budding Knives, Watering Pots, &c. And a MISCELLANEOUS DEPARTMENT, consisting of Farming and Gardening Books, Silk and Beet Sugar making, Bulbous and Dahlia Roots, (Green House and Parlor Plants in the season,) Strawberry Plants, Raspberry Canes, Sweet Potatoe-Sets, Rhubarb or Pie Plant Roots, Asparagus Roots, Cauliflower, Cabbage, Egg and Tomato Plants and Sutton's Double Dasher Churns, Improved Copper Pumps, Silk Reels, Silk Worm Eggs, and the genuine Morus Multicaulis or Chinese Mulberry Trees and Cuttings, with numerous other notions calculated to make the establishment deserving extended patronage; and the public may rely on being supplied with as PURE and GENUINE SEEDS as can be found in the eastern cities, New York not excepted. The subscriber desires no other confidence or patronage than what is fully merited, and as the establishment of a business of this nature is of considerable importance to aid the developement of the resources of the soil, he hopes the enterprise will be patronized far enough to make it a mutual benefit to him and the public. Ample support is necessary this year to ensure its continuance hereafter, and J. H. takes this opportunity of returning thanks to the public for past favors, and assures them, that their earnest desire to see it succeed, shall be more than equalled by his indefatigable exertions to deserve it. A liberal discount allowed to Retail dealers and Pedlars, and in no case will Seeds be sent out on commission. Catalogue of Vegetable, Flower and Field Seeds can be had gratis, on application to

JAMES HOUGHTON, General Agent.

CLEVELAND CITY SEED STORE, February 26, 1839. mar 9-f3t

Morus Multicaulis Cuttings.

THE subscriber can furnish 10,000 genuine Morus Multicauli Cuttings if applied to soon. E. H. MIX.

Avon, Livingston Co., N. Y. an26 3m

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

For Sale.

A SMALL FARM, finely situated, and of uncommon productiveness, near a large village on the Erie Canal, and admirably adapted to the dairy business and marketing. For further particulars, and terms, inquire at this office. Dec. 29—tf

Morus Multicaulis.

A FINE lot for sale; also, a few English Hawthorn of large size, a very desirable lot, by S. MOULSON,

February 27. Front-street.

Monroe Horticultural Garden and Nursery,

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer

April 1, 1838. ASA ROWE.

Rochester Seed Store, 1839.

REYNOLDS & BATEHAM, the proprietors of this well known establishment, respectfully announce that they have again on hand a fine assortment of English and American SEEDS, of the latest growth, including all the most valuable and newly introduced articles of garden and field culture—Grain, Grass, Esculent Vegetable, Tree, Shrub, Herb and Flower Seeds. Also, a large collection of Garden Tools, Agricultural and Horticultural implements, Books, &c. and a splendid collection of Green House Plants.

The liberal and constantly increasing patronage which this establishment has received during the past four years, is a gratifying evidence that its usefulness is in a measure appreciated by an intelligent community, and that the efforts of the proprietors to give satisfaction have not been unsuccessful. Great pains are taken to have all articles sold at this establishment of the very best quality, and the proprietors hope, by unremitted exertion, together with their experience in the business, and facilities for growing and importing supplies, to merit the fullest confidence of the community, without which they do not ask or expect a continuation of its liberal patronage. Merchants and others supplied with superior Seeds either by weight at wholesale, or neatly put up in small papers for retailing, at prices which will afford them a handsome profit. Small Assortments will not be furnished on commission, but an agency is, or will be established in each of the principal villages in Western New York, where a full assortment will be left for sale.

A Catalogue of 42 pages may be had on application.

REYNOLDS & BATEHAM,

No. 3 & 5 Arcade Hall, Rochester, N. Y., Jan. 1st, 1839.